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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/692,257	10/19/2000	Philip W. Miller	38-21(15771)B	7102

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EXAMINER

TUNG, JOYCE

ART UNIT	PAPER NUMBER
1637	14

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/692,257

Applicant(s)
Miller et al.

Examiner
Joyce Tung

Art Unit
1637



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jul 9, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 8-13 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 8-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

The amendment filed 11/14/2002 has been entered. Following the entry of the amendment, claims 1 and 8-13 are pending.

1. The rejection of claim 1 under 35 U.S.C. §112, second paragraph is withdrawn.
2. claim 1 remains rejected under 35 U.S.C. 102(e) as being anticipated by Klann (6068974, issued 5/30/2000).

Klann discloses a 674 base pair purified nucleic acid molecule containing a 7 base pair fragment at 425 of SEQ ID NO:1 (See column 13, lines 1-20).

The response argues that claim 1 is directed to a nucleic acid molecule which encodes a maize protein or fragment comprising a nucleic acid of SEQ ID NO:1 and '974 does not disclose SEQ ID NO:1. However, claim 1 does not define what is the maize protein, for example, what amino acid sequence consists the maize protein. Moreover, the claim language recites that a substantially purified nucleic acid molecule ...comprising a nucleic acid sequence of SEQ ID NO:1. The limitation reads on the teachings of Klann that a 674 base pair purified nucleic acid molecule contains a 7 base pair fragment at 425 of SEQ ID NO:1 (See column 13, lines 1-20.) Thus the teachings of Klann anticipate the limitations of claim 1. The rejection is maintained.

3. Claims 1 and 8-13 remain rejection ed under 35 U.S.C. §101, first paragraph, as allegedly lacking a "specific and substantial" asserted utility or a well-established utility.

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The response argues that as acknowledged by the examiner, the specification describes multiple objectives and utilities that are met by the present invention. However, each utility should be addressed in the specification.

The response further argues that the claimed nucleic acid molecules encompass many utilities, nucleic acid sequences may generally be used to identify and isolate related sequences, when used in this manner, the result is not generic. However, the specification should address what specific sequence is identified and what is the related sequences isolated.

As set forth in the Office action mailed 4/09/2003 the disclosed use of the nucleic acid is generally applicable to any nucleic acid and therefore is not particular to the nucleic acid sequence being claimed. In addition, there is no description that the protein encoded by the nucleic acid sequence is produced. Because the claimed invention is not supported by a specific and substantial asserted utility, credibility has not been assessed. There is no any art of record discloses or suggests any property or activity for the nucleic acid molecules. Thus the rejection is maintained.

4. Claims 1 and 8-13 remain rejected under 35 U.S.C. §112, first paragraph (Enablement). Specifically, since the claims invention is not supported by either a "specific and substantial" asserted utility or a well-established utility, one skill in the art would not know how to use the claimed invention so that it would operate as intended without undue experimentation.

The response argues that claims 1 and 8-13 are not directed to polypeptide sequence, nor to "active muteins" and the Office seems to suggest that claims 1 and 8-13 are nevertheless

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limited in scope to “active muteins”. It appears that the Office action mailed 4/9/2003 does not suggest the claim to limit in scope to “active muteins”. The Office action mailed 4/9/2003 indicates that regarding variants of fragments of SEQ ID NO: 1, the variants of the fragment of SEQ ID NO: 1 is extremely complex and unpredictable and the specification does not provide an adequate guidance as to the nature of active derivatives that may be constructed. The examples in the specification cited by the response (See pg. 11, last paragraph to pg. 12, first paragraph) are general guidances which can be applied to any nucleic acid sequences.

The response further argues that Applicants have described the complete chemical structure of SEQ ID NO:1. However, the claim only claims that a substantially purified nucleic acid molecule that encodes a maize protein or fragment comprising a nucleic acid sequence of SEQ ID NO: 1. This is not a complete chemical structure of SEQ ID NO:1. Therefore, the rejection is maintained.

5. Claim 1 is rejection under 35 U.S.C. 112, first paragraph (Written Description), as containing subject matter which was not described in the specification in such way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The response argues that claim 1 is directed to a substantially purified nucleic acid molecule that encodes a maize protein or fragment thereof comprising a nucleic acid sequence of SEQ ID NO:1. The rejection is in error. However, there is no written description as to what is a

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nucleic acid sequence of SEQ ID NO 1 which encodes the maize protein. Therefore the rejection is maintained.

New Grounds Rejections

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. Claim 9 is also rejected under 35 U.S.C. 102(e) as being anticipated by Klann (6068974, issued 5/30/2000) with the same reasons as set forth in section 2 above.

Summary

8. No claims are allowable.

9. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Joyce Tung whose telephone number is (703) 305-7112. The examiner can normally be reached on Monday-Friday from 8:00 AM-4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached at (703) 308-1119 on Monday-Friday from 10:00 AM-6:00 PM.


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Any inquiries of a general nature or relating to the status of this application should be directed to the Chemical/Matrix receptionist whose telephone number is (703) 308-0196.

10. Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Art Unit 1637 via the PTO Fax Center located in Crystal Mall 1 using (703) 305-3014 or 308-4242. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989).

Joyce Tung

J.T.
September 29, 2003


ETHAN WHISENANT
PRIMARY EXAMINER